

Claims:

1 1. A method to manage packet fragmentation for address translation, comprising:  
2 receiving a plurality of packet fragments for a packet having a first address;  
3 translating said first address into a second address without reassembling said  
4 packet fragments into said packet; and  
5 sending said packet fragments using said second address.

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1 2. The method of claim 1, wherein said translating comprises:  
2 identifying a packet fragment having a packet header, with said packet header  
3 having a packet identifier, translation information and a packet length;  
4 determining whether all packet fragments for said packet have been received;  
5 retrieving translation information from said packet header; and  
6 translating said first address into said second address using said translation  
7 information.

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1 3. The method of claim 2, wherein said translation information comprises a port  
2 number.

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1 4. The method of claim 2, wherein each packet fragment includes a packet fragment  
2 header having said packet identifier, a more bit and an offset value, and said determining  
3 comprises:

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4 storing each packet fragment having said packet identifier and said more bit set to  
5 a predetermined value; and  
6 determining whether all packet fragments for said packet have been received  
7 using said offset values.

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1 5. The method of claim 4, wherein each offset value represents a position for said  
2 packet fragment in said packet, and said determining whether all packet fragments for  
3 said packet have been received using said offset values comprises:  
4 collecting said offset values;  
5 retrieving said packet length; and  
6 determining whether all positions for said packet are filled by said collected offset  
7 values using said packet length.

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1 6. The method of claim 2, wherein each packet fragment includes a packet fragment  
2 header having said packet identifier, a more bit and an offset value, and said determining  
3 comprises:  
4 storing each packet fragment having said packet identifier and said offset value is  
5 a value other than zero; and  
6 determining whether all packet fragments for said packet have been received  
7 using said offset values.

1 7. The method of claim 6, wherein each offset value represents a position for said  
2 packet fragment in said packet, and said determining whether all packet fragments for  
3 said packet have been received using said offset values comprises:

4 collecting said offset values;

5 retrieving said packet length; and

6 determining whether all positions are filled by said collected offset values using  
7 said packet length.

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1 8. The method of claim 5, wherein each offset value represents a position in bytes  
2 divided by eight for said packet fragment in said packet.

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1 9. The method of claim 7, wherein each offset value represents a position in bytes  
2 divided by eight for said packet fragment in said packet.

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1 10. The method of claim 1, further comprising:

2 detecting an occurrence of a terminating condition prior to receiving all of said  
3 packet fragments for said packet; and

4 releasing said packet fragments in accordance with said detection.

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1 11. A packet fragmentation manager to manage packet fragmentation for address  
2 translation, comprising:

3 a collection module for collecting and storing a plurality of packet fragments for a  
4 packet having a first address;

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5 a verification module for verifying all packet fragments for said packet have been  
6 received; and

7 a translation module for retrieving translation information from one of said packet  
8 fragments and translating said first address into a second address using said translation  
9 information.

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1 12. The packet fragmentation manager of claim 11, further comprising a  
2 communication module for sending said packet fragments to said second address.

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1 13. A system to manage packet fragmentation for an address translation device,  
2 comprising:

3 a source node to send packet fragments for a packet having a first address; and

4 an intermediate node to receive said packet fragments and translate said first  
5 address to a second address without reassembling said packet fragments into said packet.

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1 14. The system of claim 13, further comprising a destination node having said second  
2 address to receive said packet fragments and reassemble said packet fragments into said  
3 packet.

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1 15. A system to manage packet fragmentation for an address translation device,  
2 comprising:

3 a computer platform adapted to manage packet fragmentation;

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said platform being further adapted to receive a plurality of packet fragments for a packet having a first address, translate the first address into a second address without reassembling said packet fragments into said packet, and send said packet fragments using said second address.

16. The system of claim 15, wherein said platform is further adapted to perform said translation by identifying a packet fragment having a packet header, with said packet header having a packet identifier, translation information and a packet length, determining whether all packet fragments for said packet have been received, retrieving translation information from said packet header, and translating said first address into said second address using said translation information.

17. The system of claim 15, wherein said platform is further adapted to use offset values from each packet fragment to determine whether all packet fragments for said packet have been received by collecting said offset values, retrieving a packet length for said packet, and determining whether all positions for said packet are filled by said collected offset values using said packet length.

18. An article comprising:  
a storage medium;  
said storage medium including stored instructions that, when executed by a processor, result in receiving a plurality of packet fragments for a packet having a first address, translating said first address into a second address without reassembling said

6 packet fragments into said packet, and sending said packet fragments using said second  
7 address.

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1 19. The article of claim 18, wherein the stored instructions, when executed by a  
2 processor, further result in said translating by identifying a packet fragment having a  
3 packet header, with said packet header having a packet identifier, translation information  
4 and a packet length, determining whether all packet fragments for said packet have been  
5 received, retrieving translation information from said packet header, and translating said  
6 first address into said second address using said translation information.

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1 20. The article of claim 19, wherein the stored instructions, when executed by a  
2 processor, further result in using offset values from each packet fragment to determine  
3 whether all packet fragments for said packet have been received by collecting said offset  
4 values, retrieving a packet length for said packet, and determining whether all positions  
5 for said packet are filled by said collected offset values using said packet length.

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1 21. The article of claim 18, wherein the stored instructions, when executed by a  
2 processor, further result in detecting an occurrence of a terminating condition prior to  
3 receiving all of said packet fragments for said packet, and releasing said packet fragments  
4 in accordance with said detection.

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